



Study on Consumer Buying Behavior of Herbicide in Barabanki District of Uttar Pradesh

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<https://doie.org/10.0713/AE.2024704539>

ABSTRACT

The study on herbicide purchasing behavior in Barabanki District, Uttar Pradesh, focuses on the factors influencing herbicide purchases among local farmers. Data from 150 respondents was collected through structured interviews, revealing that the primary consumer base is middle-aged men, with a significant representation of those earning above 2 lakh rupees. Education levels among these consumers are low, with a significant portion being illiterate or having only primary education. Herbicide usage is closely tied to agricultural livelihoods, and product attributes such as effectiveness and safety are the leading factors influencing buying decisions. Marketing strategies, product availability, and word-of-mouth also play crucial roles in shaping consumer behavior. Major constraints in herbicide usage include high costs, limited availability, environmental impacts, soil compatibility, weather dependency, and health risks.

Keywords: *Consumer Behaviour, Marketing Strategies, Constraints, Buying Decisions.*

INTRODUCTION

Herbicides, commonly referred to as weed killers, are chemical substances specifically designed to manage and eliminate undesirable plants during the process of cultivation. There are two primary categories of herbicides: selective and non-selective. Selective herbicides are formulated to target and control specific weed species while preserving the desired crops, thereby ensuring that the beneficial plants remain unaffected. In contrast, non-selective herbicides are used to eradicate all vegetation and are typically applied to areas such as waste grounds, industrial sites, and railway embankments where total

vegetation control is required. Modern herbicides are frequently synthetic analogs of natural plant hormones. These compounds disrupt the normal growth processes of plants, effectively inhibiting or altering their development. This sophisticated approach allows for precise control of weed populations in various agricultural settings. In 2012, herbicides accounted for 44% of the global expenditure on pesticides in the United States, surpassing other categories such as insecticides, fungicides, and fumigants. Besides their prominent role in agriculture, herbicides are also employed in forestry,

pasture systems, and wildlife habitat management to maintain and enhance these environments. The global herbicide market is on a growth trajectory, with projections indicating it will reach a value of \$7,998.9 million by 2025, expanding at a compound annual growth rate (CAGR) of 4.8%. The primary goal of herbicide application is to boost agricultural productivity by effectively eliminating unwanted weeds and herbs that compete with crops for nutrients, water, and light. Despite their benefits, the use of synthetic herbicides poses significant environmental and health risks, leading to stringent regulatory measures. These regulations can impede the growth of the global herbicide market as they impose limitations on the use and development of herbicides. An example of an advanced herbicide product is Agil, a combination herbicide designed to control grasses, broadleaf weeds, and sedge weeds in crops like chili. Agil features a unique oil dispersible (OD) formulation that enhances its efficacy in weed control, offering a robust solution for managing diverse weed populations in agricultural fields. Keeping in above view, present study conducted under following objectives.

1. To identify the factors effecting the consumer buying behaviour of Agil
2. To identify the constraints in the usage of herbicides.

RESEARCH METHODOLOGY

The study focuses on Fatehpur, one of the 15 blocks in Barabanki district, Uttar Pradesh, India, as it is one of the largest producers of Chilli in Uttar Pradesh. The area is chosen for its prestigious status in producing Chilli, with an area of 1.56 lakh hectares under cultivation. The study selects five villages

from the selected villages, categorized into five size groups based on their land of cultivation of Chilli. The primary and secondary markets were selected purposively, with the primary market being farmers who purchase herbicides from local distributors, the secondary market being agricultural supply stores, retailers, and dealers, and the market functionaries being manufacturers, distributors, wholesalers, retailers, and agricultural consultants.

Primary data was collected from sample respondents using a well-defined scheduled personal interview, while secondary data was collected from various sources like websites, internet, wholesalers, and retailers. An interview schedule was formulated for collecting information regarding the research, and the data was consolidated, classified, tabulated, and analysed using a structured questionnaire. The study was conducted in 2023-2024 agriculture crop year. Statistical tools used to analyse the data included the Chi-square test, mean, median, mode, market share, and garret ranking technique. The Garret ranking technique evaluates the problems faced by the sample respondents and their preference among the given factors.

RESULTS AND DISCUSSION

Objective- 1 To identify the factors effecting the consumer buying behaviour of Agil

- **Price & Price fluctuations of the product:** The price of the Agil herbicide is one of the significant factors for consumers in their decision to purchase. Consumers may be more likely to purchase the herbicide if they perceive it as being priced reasonably compared to similar products in the market. The consumer may choose a product that

offers the best value for money. The high price product may not be affordable to every farmer and the price fluctuations may also affect the consumer buying behaviour.

- **Brand reputation:** The reputation of the brand that produces Agil herbicide may influence consumer behavior. Consumers may be more likely to purchase a product from a brand that has a positive reputation and perceived as trustworthy. Customers Was prefer to buy herbicides from well-known brands, as they may perceive these products to be of higher quality and more reliable.
- **Product attributes:** The attributes of the product itself, such as its effectiveness, safety, and ease of use, may influence consumer behavior. Consumers may be more likely to purchase Agil herbicide if they perceive it as being effective and safe.
- **Availability of product:** The availability of the herbicide in retail stores or online may impact consumer buying behavior. If the herbicide is widely available, consumers may be more likely to purchase it.
- **Marketing and advertising:** The marketing and advertising strategies employed by the manufacturer of Agil herbicide may influence consumer behavior. Effective advertising may create brand awareness and promote the benefits of the herbicide, which could influence consumer purchasing decisions.
- **Word of mouth:** Word of mouth may have some influence on buying behavior of the farmers, Word of mouth refers to the informal communication among individuals about products or services, including recommendations, reviews,

and opinions. When a customer receives positive feedback about a product from someone they know and trust, it can have a significant impact on their buying behavior. Positive word of mouth can increase the perceived value of a product, create a sense of social proof, and reduce the perceived risk associated with the purchase decision. On the other hand, negative word of mouth can also have a significant impact on buying behavior. Negative reviews or feedback can discourage potential customers from purchasing the product or service and lead to a loss of trust in the brand.

- **Opinion leaders:** Opinion leaders are individuals who are widely recognized as knowledgeable, influential, and credible within a specific domain or social network. These individuals often possess expertise, experience, or a keen understanding of particular subjects, making them authoritative figures whose opinions are highly valued. Their influence extends significantly to shaping the attitudes, opinions, and behaviours of others within their social circles. When opinion leaders express positive opinions or make recommendations about a product or service, their endorsement can substantially influence the purchasing decisions of those around them. This influence occurs because people tend to trust and follow the advice of those, they consider well-informed and reliable. As a result, opinion leaders play a crucial role in the diffusion of information and innovations within communities, acting as intermediaries who bridge the gap between information sources and the general public. The impact of opinion leaders is particularly evident in

consumer behaviour. When they share favourable reviews or endorsements of products, their followers are more likely to be persuaded to try these products, often prioritizing these recommendations over traditional advertising. This phenomenon is rooted in the social trust and credibility that opinion leaders command. They can sway opinions on a wide range of topics, including new technologies, fashion trends, health practices, and more. Opinion leaders can also provide valuable information and advice to their followers, which can help them make

informed purchase decisions. By building positive relationships with opinion leaders, companies can leverage their influence to reach a wider audience and influence buying behavior.

- **Economic factors:** Economic Factors like Annual income of the household was found to have a significant influence in buying behavior of consumer. As branded products are expensive as compared to local ones, so an individual with high annual income has the purchasing power for branded products thus he goes for branded herbicide.

Table 1. Evaluation of factors influencing buying behaviour of consumer based on the garrets ranking technique

Factors	Distribution of respondents				
	Rank 1 st	Rank 2 nd	Rank 3 rd	Rank 4 th	Rank 5 th
Price & Price fluctuations	87	22	16	14	11
Brand reputation	65	12	18	20	35
Product attributes	100	35	15	0	0
Availability of product	75	29	18	15	13
Marketing and advertising	78	35	18	10	9
Word of mouth	82	27	17	11	13
Opinion leaders	69	25	23	22	11
Economic factors	85	26	19	13	7

Table 2. Distribution of respondents according to ranking

S. No.	Factors	Garrett score	Garrett rank
1	Price & Price fluctuations	70.9	3
2	Brand reputation	65.1	8
3	Product attributes	74.8	1
4	Availability of product	69.4	6
5	Marketing and advertising	70.4	5
6	Word of mouth	70.6	4
7	Opinion leaders	68.2	7
8	Economic factors	71.2	2

Table 2, shows that the factors effecting the consumer buying behavior of Agil herbicide in which Product attributes ranks 1st followed by, Economic factors rank 2rd, Price & Price fluctuations rank 3rd Word of mouth ranks 4th, Marketing and advertising ranks 5th, Availability of product ranks 6th, Opinion leaders rank 7th, Brand reputation ranks 8th.

Objective 2: To identify the constraints in the usage of herbicides.

Table 3. Constraints in the usage of herbicides

S. No.	Factors	Garrett score	Garrett rank
1	Cost	74.8	1
2	Limited Availability	71.2	2
3	Environmental Impact	70.9	3
4	Soil Compatibility	70.6	4
5	Weather Dependency	70.4	5
6	Health Risks	69.4	6
7	Application Complexity	68.2	7
8	Regulatory Restrictions	67.9	8
9	Resistance Development	65.1	9
10	Public Perception and Social Acceptance	66.8	10

The study identifies key constraints in herbicide usage, ranking them based on Garrett scores. The cost of herbicides is the most significant barrier, with a score of 74.8. Limited availability and environmental impact are also high, highlighting concerns over herbicide access and environmental impact. Soil compatibility and weather dependency are also significant factors. Health risks, application complexity, and regulatory restrictions are mid-ranked constraints. Resistance development and public perception are notable but slightly lesser concerns. This ranking helps understand which aspects of herbicide use are perceived as most problematic, guiding efforts to mitigate these issues.

CONCLUSION

The study on consumer buying behavior of herbicides in Barabanki district reveals critical insights into the demographics, preferences, and constraints affecting herbicide use. Key findings show a dominant purchasing group of middle-aged men, primarily engaged in agriculture, with a significant portion earning higher incomes. Consumers prioritize product

effectiveness and safety, with cost being the most significant barrier to herbicide usage. This indicates a need for strategies that address economic and accessibility issues while ensuring environmental safety and regulatory compliance. Understanding these factors is essential for tailoring effective marketing and product development strategies in the agricultural sector.

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